TECHNOLOGY

MICHIGAN Department of Education
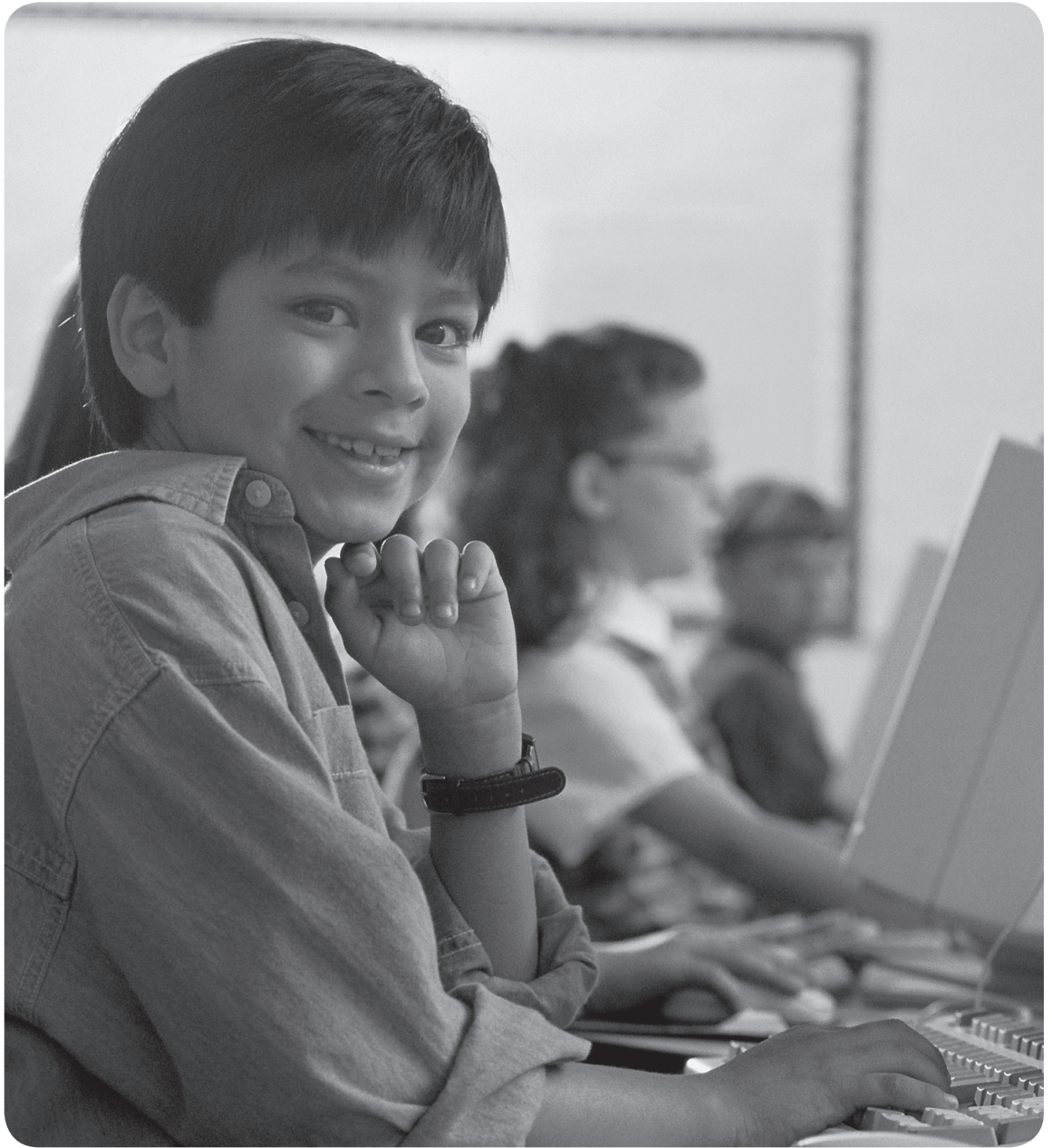
EDUCATIONAL TECHNOLOGY STANDARDS & EXPECTATIONS

Grades 6-8

Welcome to Michigan's Educational Technology Standards & Expectations

It is a goal of No Child Left Behind that schools will "Assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

The Grade Level Educational Technology Standards & Expectations for 6-8 are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S). They are meant to provide teachers with an outline of learning expectations and will be used to drive educational technology literacy assessments for the next several years.

The goal is that these Standards and Expectations will ultimately be integrated into the various other content areas and that a supplementary document will be produced offering examples and suggestions on how they could be incorporated within those areas.

Technology Literacy

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century. The Standards and Expectations for each grade range are established to designate clearly what students are expected to know by the end of grades two, five, and eight.

Educational Technology Standards & Expectations — Grades 6-8

BASIC OPERATIONS AND CONCEPTS

By the end of Grade 8 each student will:

1. use proper keyboarding posture, finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in operating a computer

2. use appropriate technology terminology

3. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products

4. understand that new technology tools can be developed to do what could not be done without the use of technology

5. describe strategies for identifying and preventing routine hardware and software problems that may occur during everyday technology use

6. identify changes in hardware and software systems over time and discuss how these changes affected various groups (e.g., individual users, education, government, and businesses)

7. discuss common hardware and software difficulties and identify strategies for trouble-shooting and problem solving

8. identify characteristics that suggest that the computer system hardware or software might need to be upgraded

9. identify a variety of information storage devices (e.g., floppies, CDs, DVDs, flash drives, tapes) and provide a rationale for using a certain device for a specific purpose

10. identify technology resources that assist with various consumer-related activities (e.g., budgets, purchases, banking transactions, product descriptions)

11. identify appropriate file formats for a variety of applications

12. use basic utility programs or built-in application functions to convert file formats

13. proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups

Educational Technology Standards & Expectations Continued...

SOCIAL, ETHICAL, AND HUMAN ISSUES

By the end of Grade 8 each student will:

1. understand the potential risks and dangers associated with on-line communications
2. identify security issues related to e-commerce
3. discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, spam, viruses, file-sharing)
4. describe possible consequences and costs related to unethical use of information and communication technologies
5. discuss the societal impact of technology in the future
6. provide accurate citations when referencing information from outside sources in electronic reports
7. use technology to identify and explore various occupations or careers
8. discuss possible uses of technology (present and future) to support personal pursuits and lifelong learning
9. identify uses of technology to support communication with peers, family, or school personnel

TECHNOLOGY PRODUCTIVITY TOOLS

By the end of Grade 8 each student will:

1. apply common software features (e.g., thesaurus, formulas, charts, graphics, sounds) to enhance communication and to support creativity
2. use a variety of technology resources, including the internet, to increase learning and productivity
3. explore basic applications that promote creativity (e.g., graphics, presentation, photo-editing, programming, video-editing)
4. use available utilities for editing pictures, images, or charts
5. use collaborative tools to design, develop, and enhance materials, publications, or presentations

TECHNOLOGY COMMUNICATIONS TOOLS

By the end of Grade 8 each student will:

1. use a variety of telecommunication tools (e.g., e-mail, discussion groups, IM, chat rooms, blogs, video-conferences, web conferences) or other online resources to collaborate interactively with peers, experts, and other audiences
2. create a project (e.g., presentation, web page, newsletter, information brochure) using a variety of media and formats (e.g., graphs, charts, audio, graphics, video) to present content information to an audience

TECHNOLOGY RESEARCH TOOLS

By the end of Grade 8 each student will:

1. use a variety of Web search engines to locate information
2. evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness
3. identify types of internet sites based on their domain names (e.g., edu, com, org, gov, au)
4. know how to create and populate a database
5. perform queries on existing databases
6. know how to create and modify a simple database report
7. evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specific task

TECHNOLOGY PROBLEM-SOLVING AND DECISION-MAKING TOOLS

By the end of Grade 8 each student will:

1. use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist with solving a basic problem
2. describe the information and communication technology tools to use for collecting information from different sources, analyze findings, and draw conclusions for addressing real-world problems

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